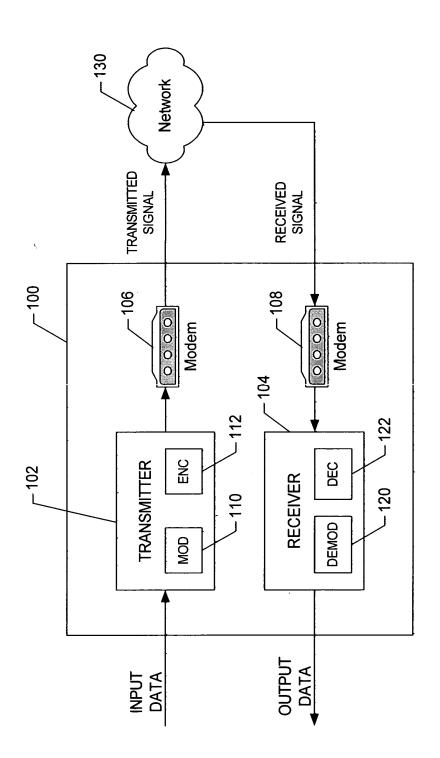
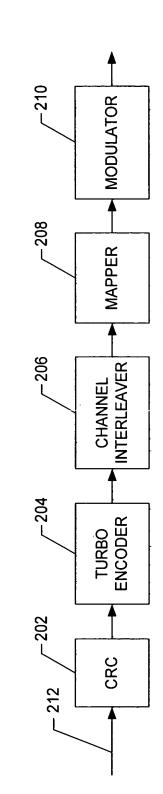
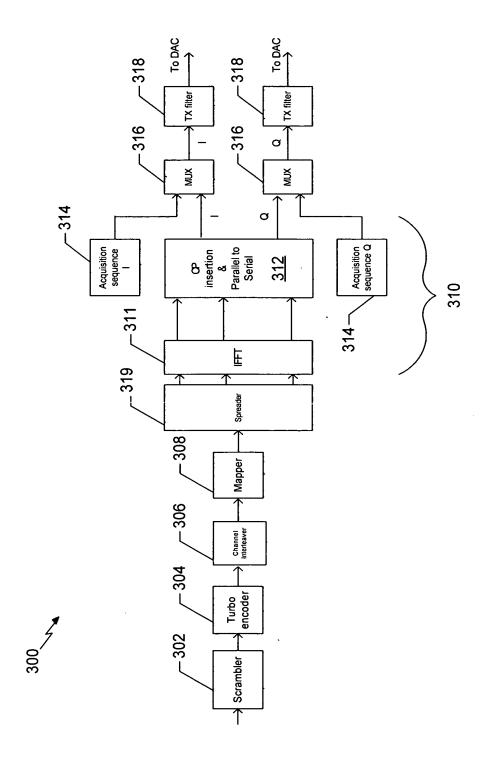
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FOR WIRELESS APPLICATIONS"
Inventor(s): A. Kumar
Atty Docket No.: 39908-6214
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Turbo code internal internal

Input

Output 2

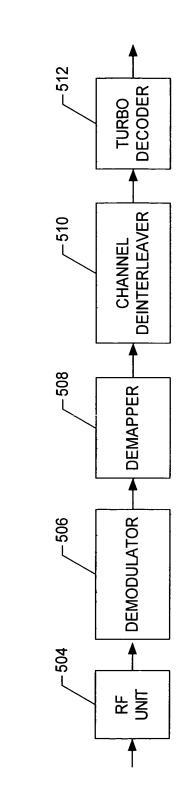
Output 1

constituent encoder (RSC 1)

ISt

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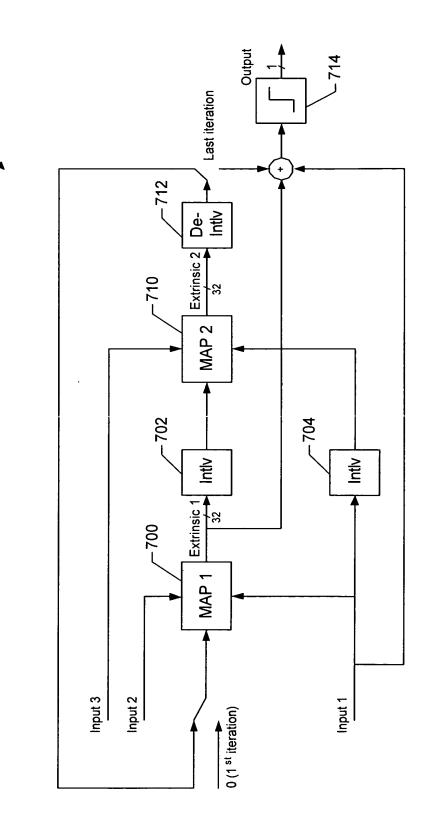




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6/14 Turbo Decoder 650 & Parallel to Serial RATE · <u>644</u> 000 Channel State Information FIGURE 6 Symbol Demapper RATE 642 Desprea der 651 Multiply by Kmod Compensator Coefficients 940 RATE Phase Processing Phase Compensator 뎚 636 638 604 Equalizer Coefficients Equalizer 634 Fine Frequency offset Esimate $\overline{8}$ SIGNAL FIELD 632 -620 Coarse Frequency offset Esimate 622 E Fine frequency offset estimation, CSI esimation Equalizer coefficients Acquisition sequence detection
Frame syncronization,
Coarse frequency offset estimation, 630 & Serial to Parallel removal გ 88 100MHz 602 Coarse Frequency offset Esimate——Fine Frequency offset Esimate Acquisition sequence detection failed - Reset AGC and the Receiver RX filter 612 AGC 614 From ADC > 100MHz

Gain Contro

650



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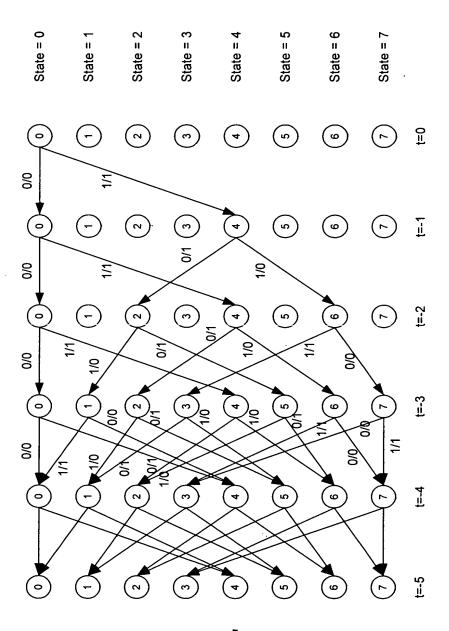


FIGURE 8

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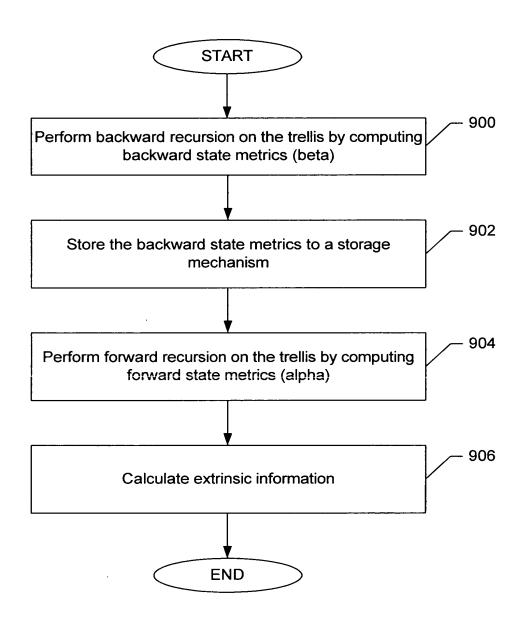


FIGURE 9

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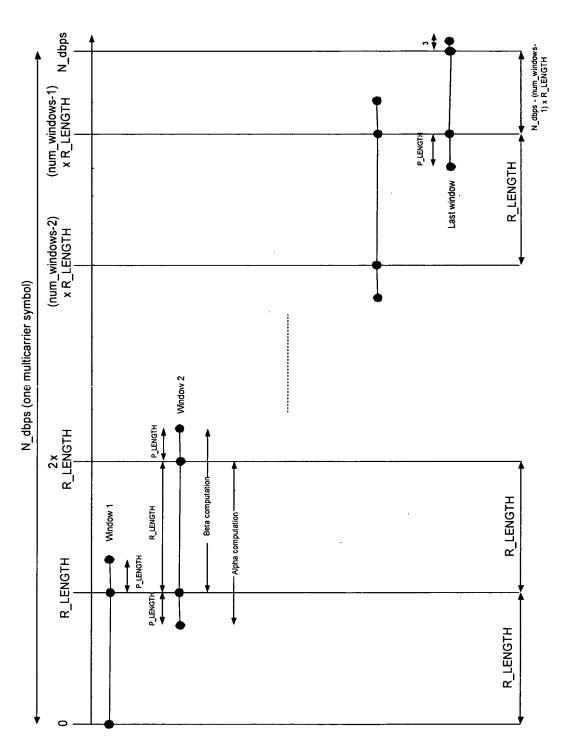


FIGURE 10

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Beta	x+3	x+2	× ++	×	- -×	x-2	×,3	* 4	×-5	9 ×	X-7	8 *	6-×	x-10	x-11	x-12
Stored Beta				×				* 4				8-×				x-12
Beta recovered during extrinsic information computation	ed during	y extrinsic	c informs	ation con	nputation							1	<u>}</u>			
Cycle (n+0)	<u>8</u>	Compute x+1 and x+2	+1 and x	7												
Cycle (n+1)	Ŝ	Compute x+3	က္													
Cycle (n+2)	Th	The decoder uses x+3 and x+2. Compute x-3 and x-2	ır uses x	+3 and x	(+2. Cor	npute x-	3 and x-2	6:								
Cycle (n+3)	Th	The decoder uses x+1 and x.	er uses x	:+1 and >		Compute x-1	-									
Cycle (n+4)	Th	The decoder uses x-1 and x-2. Compute x-7 and x-6	ır uses x	-1 and x	-2. Cor	npute x-	7 and x-{									
Cycle (n+5)	Tħŧ	The decoder uses x-3 and x-4. Compute x-5	ır uses x	-3 and x	4. S	mpute x-	က္					1				
Cycle (n+6)	Th	The decoder uses x-5 and x-6. Compute x-11 and x-10	y nses x	-5 and x-	-6. Cor	npute x-	11 and x	10-								
Cycle (n+7)	The	The decoder uses x-7 and x-8.	ır uses x	-7 and x		Compute x-9	တ္									
Cycle (n+8)	Th	The decoder uses x-9 and x-10. Compute x-15 and x-14	ır uses x	-9 and x-	-10. Cc	mpute x	-15 and	x-14								
93 19															:	

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4	4	
1	2/1	4

Beta	x+3	x+2	x+1	×	<u>*</u>	x-2	×.3	* 4	x-5	9 ×	X-7	8-×	6-×	x-10	x-11	x-12
Stored Beta		x+2		×		x-2		*		9 ×		8 ×		×-10		x-12
Beta recovered during extrinsic information computation	ed during	y extrinsion	c informs	ation com	putation					1						
Cycle (n+0)	Ŝ	Compute x+1	7													
Cycle (n+1)	Τħ	The decoder uses x+	ır uses x	:+1 and x.		Compute x-1	_	 								
Cycle (n+2)	Th	The decoder uses x-1	x səsn x		2. Con	and x-2. Compute x-3	<u> </u>									
Cycle (n+3)	Τh	The decoder uses x-3	ır uses x	-3 and x-4.	i	Compute x-5	ري د									
Cycle (n+4)	Th	The decoder uses x-4	x səsn ı		5. Co	and x-5. Compute x-5	z,	:								
Cycle (n+5)	Τħ	The decoder uses x-5	ır uses x	-5 and x-	6. Con	and x-6. Compute x-7							:			
Cycle (n+6)	Th	The decoder uses x-7	ır uses x	-7 and x-8.		Compute x-9	6					:				
Cycle (n+7)	Th	The decoder uses x-9	ır uses x	-9 and x-10.		Compute x-11	-11									
Cycle (n+8)	Th	The decoder uses x-1	ır uses x	-11 and x-12.	c-12. C	Compute x-13	x-13					,				
0 0						•										

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	(window 0)	(window 1)	(window 2)		2431 (window 18)	(window 19)	-
	127	255	383	•	2431		
	126	254	382	•	2430		
	125	253	381	•	2429		
			,			2505	
	:	:	:		:	:	
	4	132	260	•	2308	2436	
_	က	131	259	•	2307	2435	
<u> </u>	2	130	258	•	2306	2434	
<u> </u>	~	129	257	•	2305	2433	
	0	128	256	•	2304	2432	

FIGURE 13

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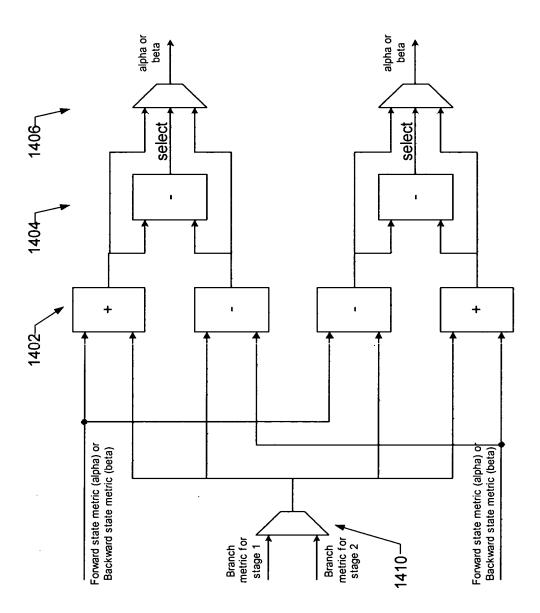


FIGURE 14